SEQUENCE LISTING

<110> WAKITA, Takaji
      KATO, Takanobu
      DATE, Tomoko
      MIYAMOTO, Michiko
      TANABE, Jun-ichi
      SONE, Saburo

<120> NUCLEIC ACID CONSTRUCT CONTAINING FULL LENGTH GENOME OF HUMAN
      HEPATITIS C VIRUS ... AND METHOD OF PRODUCING HEPATITIS C VIRUS
      PARTICLE

<130> 1254-0321PUS1

<140> US 10/589,902
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<151> 2005-02-21

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<160> 26

<170> PatentIn Ver. 2.1

<210> 1
<211> 340
<212> RNA
<213> Hepatitis C virus

<220>
<221> misc_feature
<222> (1)..(340)
<223> 5' non-translated region of hepatitis C virus genomic RNA
      derived from JFH-1 clone

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cuucacgcag aaagcgccua gccauggcgu uaguaugagu gucguacagc cuccaggccc 120
cccccucccg ggagagccau aguggucugc ggaaccggug aguacaccgg aauugccggg 180
aagacugggu ccuuucuugg auaaacccac ucuaugcccg gccauuuggg cgugcccccg 240
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<212> RNA
<213> Hepatitis C virus

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<222> (1)..(573)
<223> core protein-coding sequence of hepatitis C virus genomic RNA

1

derived from JFH-1 clone

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augagcacaa auccuaaacc ucaaagaaaa accaaaagaa acaccaaccg ucgcccagaa 60
gacguuaagu ucccgggcgg cggccagauc guuggcggag uauacuuguu gccgcgcagg 120
ggccccaggu uggguugugcg cacgacaagg aaaacuucgg agcgguccca gccacguggg 180
agacgccagc ccaucccaa agaucggcgc uccacuggca aggccugggg aaaaccaggu 240
cgccccuggc cccuauaugg gaaugaggga cucggcuggg caggauggcu ccuguccccc 300
cgaggcucuc gcccucccug gggccccacu gacccccggc auaggucgcg caacgugggu 360
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ggcgccccgc uuaguggcgc cgccagagcu gucgcgcacg gcgugagagu ccuggaggac 480
gggguuaauu augcaacagg gaaccuaccc gguuuccccu uuucuaucuu cuugcuggcc 540
cuguuguccu gcaucaccgu uccggucucu gcu   573

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<213> Hepatitis C virus

<220>
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<222> (1)..(576)
<223> E1 protein-coding sequence of hepatitis C virus genomic RNA
      derived from JFH-1 clone

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aucacuuggc agcucgaggc ugcgguucuc cacgucccccg ggugcguccc gugcgagaga 120
guggggaaua cgucacgguug uuggguugcca gucucgccaa acauggcugu gcggcagccc 180
ggugcccuca cgcagggucu gcggacgcac aucgauaugg uuguugauguc cgccaccuuc 240
ugcucugcuc ucuacguggg ggaccucugu ggcgggguga ugcucgcggc ccagguguuc 300
aucgucucgc cgcaguacca cugguuuugug caagaaugca auugcuccau cuacccuggc 360
accaucacug acaccgcau ggcaugggac augaugauga acuggucgcc cacggccacc 420
augauccugg cguacgugau gcgcguccccc gaggucauca uagacaucgu uagcggggcu 480
cacuggggcg ucauguucgg cuuggccuac uucucuaugc agggagcgug ggcgaagguc 540
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<210> 4
<211> 1290
<212> RNA
<213> Hepatitis C virus

<220>
<221> misc_feature
<222> (1)..(1290)

<223> E2 protein-coding sequence of hepatitis C virus genomic RNA
      derived from JFH-1 clone

<400> 4
ggcaccacca ccguuggagg cgcuguugca cguuccacca acgugauugc cggcguguuc 60
agccauggcc cucagcagaa cauucagcuc auuaacacca acggcaguug gcacaucaac 120
cguacugccu ugaauugcaa ugacuccuug aacaccggcu uucucgcggc cuuguucuac 180
accaaccgcu uuaacucguc aggggugucca gggcgccugu ccgccugccg caacaucgag 240
gcuuuccgga uaggguggggg cacccuacag uacgaggaua augucaccaa uccagaggau 300

                           2

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augaggccgu acugcuggca cuaccccca aagccgugug gcguaguccc cgcgaggucu 360
gugugugggcc caguguacug uuucacccc agcccgguag uaguggcac gaccgacaga 420
cguggagugc ccaccuacac auggggagag aaugagacag augucuuccu acugaacagc 480
acccgaccgc cgcagggcuc augguucggc ugcacgugga ugaacuccac ugguuucacc 540
aagacuugug gcgcgccacc uugccgcacc agagcugacu caacgccag cacggacuug 600
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ugcacaguca auuuuaccau cuucaagaua agaauguaug uaggggggu ugagcacagg 780
cucacggccg caugcaacuu cacucguggg gaucgcugcg acuuggagga cagggacagg 840
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<212> RNA
<213> Hepatitis C virus

<220>
<221> misc_feature
<222> (1)..(651)
<223> NS2 protein-coding sequence of hepatitis C virus genomic RNA
      derived from JFH-1 clone

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acacucaccc cggggguauaa gacccuccuc ggccagugucc uguggugguu gugcuaucuc 120
cugacccugg gggaagccau gauucaggag ugggguaccac ccaugcaggu gcgcggcggc 180
cgcgauggca ucgcgugggc cgucacuaua uucugcccgg guguggugu ugacauuacc 240
aaauggcuuu uggcguugcu ugggccugcu uaccucuuaa gggccgcuuu gacacaugug 300
ccguacuucg ucagagcuca cgcucgauuа agggguaugcg cuuggugaa gcagcucgcg 360
ggggguaggu auguucaggu ggcgcuauug gcccuuggca gguggacugg caccuacauc 420
uaugaccacc ucacaccuau gucggacugg ccgcuagcg gccugcgcga cuuagcgguc 480
gccguggaac ccaucaucuu caguccgaug gagaagaagg ucaucgucug gggagcggag 540
acggcugcau gugggggacau ucuacaugga cuucccgugu ccgcccgacu cggccaggag 600
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<210> 6
<211> 1893
<212> RNA
<213> Hepatitis C virus

<220>
<221> misc_feature
<222> (1)..(1893)
<223> NS3 protein-coding sequence of hepatitis C virus genomic RNA
      derived from JFH-1 clone

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caguccuucc ucggaacaac caucucgggg guuugugga cuguuuacca cggagcuggc 180
aacaagacuc uagccggcuu acggggucg gucacgcaga uguacucgag ugcugagggg 240
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gccgucgacc uauaucuggu cacgcggaac gcugauguca ucccggcucg gagacgcggg 360
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caggggguaca aaguacuagu gcuuaacccc ucgguagcug ccacccuggg guuuggggcg 720
uaccuaucca aggcacaugg caucaauccc aacauuagga cuggagucag gaccgugaug 780
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auguggaagu gccuggcccg acucaagccu acgcuugcgg ccccacacc ucuccuguac 1800
cguuugggcc cuauuaccaa ugagguacc cucacacacc cugggacgaa guacaucgcc 1860
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<212> RNA
<213> Hepatitis C virus

<220>
<221> misc_feature
<222> (1)..(162)
<223> NS4A protein-coding sequence of hepatitis C virus genomic RNA
       derived from JFH-1 clone

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ggaugcguuu ccaucaucgg ccgcuugcac gucaaccagc gagucgucgu ugcgccggau 120
aaggaggucc uguaugaggc uuuugaugag auggaggaau gc                  162
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<210> 8
<211> 783
<212> RNA
<213> Hepatitis C virus

<220>
<221> misc_feature

4

<222> (1)..(783)
<223> NS4B protein-coding sequence of hepatitis C virus genomic RNA
      derived from JFH-1 clone

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auccaaggcu ugcugcagca ggccucuaag caggcccagg acauacaacc cgcuaugcag 120
gcuucauggc ccaaagugga acaauuuugg gccagacaca uguggaacuu cauuagcggc 180
auccaauacc ucgcaggauu gucaacacug ccaggaaacc ccgcgguggc uuccaugaug 240
gcauucagug ccgcccucac caguccguug ucgaccagua ccaccauccu ucucaacauc 300
augggaggcu gguuagcguc ccagaucgca ccaccgcgg gggccaccgg cuuugucguc 360
aguggccugg uggggcugc cgugggcagc auaggccugg guaaggugcu gguggacauc 420
cuggcaggau auggugcggg cauuucgggg gcccucgucg cauucaagau caugucuggc 480
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cugguggugg gggucaucug cgcggccauu cugcgccgcc acgugggacc ggggggagggc 600
gcgguccaau ggaugaacag gcuuauugcc uuugcuucca gaggaaacca cgucgcccu 660
acucacuacg ugacggaguc ggaugcgucg cagcguguga cccaacuacu uggcucucuu 720
acuauaacca gccuacucag aagacuccac aauuggauaa cugaggacug ccccaucccca 780
ugc   783

<210> 9
<211> 1398
<212> RNA
<213> Hepatitis C virus

<220>
<221> misc_feature
<222> (1)..(1398)
<223> NS5A protein-coding sequence of hepatitis C virus genomic RNA
      derived from JFH-1 clone

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aauuggcuga cccucuaaauu guuccccaag cugcccggcc uccccuucau cucuugucaa 120
aaggggguaca aggguguguguguguu ggccggcacu ggcaucauga ccacgcgcug cccuugcggc 180
gccaacaucu cuggcaaugu ccgccugggc ucuaugagga ucacagggcc uaaaaccugc 240
augaacaccu ggcagggggac cuuuccuauc aauugcuaca cggagggcca gugcgcgccg 300
aaacccccca cgaacuacaa gaccgccauc uggaggguggug cggccucgga guacgcggag 360
gugacgcagc augggucgua cuccuaugua acaggacuga ccacugacaa ucugaaaauu 420
ccuugccaac uaccuucucc agaguuuuuc uccuggguggg acgguugugca gauccauagg 480
uuugcaccca caccaaagcc guuuuuccgg gaugaggucu cguucugcgu ugggcuuaau 540
uccuaugcug ucgggucccca gcuucccgu gaaccugagc ccgacgcaga cguauugagg 600
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ggaucaccuc caucugaggc gagcuccuca gugagccagc uaucagcacc gucgcugcgg 720
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gauaccaccg ugugcugc   1398

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<211> 1773
<212> RNA
<213> Hepatitis C virus

<220>
<221> misc_feature
<222> (1)..(1773)
<223> NS5B protein-coding sequence of hepatitis C virus genomic RNA
       derived from JFH-1 clone

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uugccaauca acccuuugag uaacucgcug uugcgauacc auaacaaggu guacuguaca 120
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gacgcccauu augacucagu cuuaaaggac aucaagcuag cggcuuccaa ggucagcgca 240
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guuuacccug accucggcgu ccgggucugc gagaaaaugg cccucuauga cauuacacaa 540
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guaggggug gccucuuccu acuccccgcu cgg   1773

<210> 11
<211> 239
<212> RNA
<213> Hepatitis C virus

<220>
<221> misc_feature
<222> (1)..(239)
<223> 3' non-translated region of hepatitis C virus genomic RNA
       derived from JFH-1 clone

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ucuuauucua cuuucuuucu ugguggcucc aucuuagccc uagucacggc uagcugugaa 180
agguccguga gccgcaugac ugcagagagu gccguaacug gucucucugc agaucaugu 239

<210> 12
<211> 9707
<212> RNA
<213> Hepatitis C virus

<220>
<221> misc_feature
<222> (1)..(9707)
<223> full-length Hepatitis C virus genomic RNA derived from JFH-1
      clone

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cacuccccug ugaggaacua cugucuucac gcagaaagcg ccuagccaug gcguuaguau 120
gagugucgua cagccuccag gccccccccu cccgggagag ccauaguggu cugcggaacc 180
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cccggccauu ugggcgugcc cccgcaagac ugcuagccga guagcguugg guugcgaaag 300
gccuugugguu acugccugau agggcgcuug cgagugcccc gggaggucuc guagaccgug 360
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9

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13

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14

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16

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<211> 9707
<212> RNA
<213> Artificial Sequence

<220>
<223> replicon RNA comprising full-length Hepatitis C virus genomic
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      has been mutated into GND

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<220>
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<210> 20
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26

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27

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29

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36

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